**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

COMMWORKS SOLUTIONS, LLC
 	
    Plaintiff,
 	
  v.
 	
COMCAST CABLE COMMUNICATIONS, LLC and COMCAST CABLE COMMUNICATIONS MANAGEMENT, LLC,
 	
    Defendants.
	Civil Action No.: 6:21-cv-00366-ADA

COMCAST'S OPENING CLAIM CONSTRUCTION BRIEF

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I.   INTRODUCTION

Pursuant to Court's Order Governing Proceedings – Patent Case and the Agreed

Scheduling Order (Dkt. 24), Comcast Cable Communications, LLC and Comcast Cable

Communications Management, LLC (collectively, "Comcast") submit this opening brief

addressing claim construction disputes between the parties with regard to the asserted patents:

U.S. Patent No. 6,832,249 (the "'249 Patent"), U.S. Patent No. 7,027,465 (the "'465 Patent"),

U.S. Patent No. 7,177,285 (the "'285 Patent"), U.S. Patent No. 7,760,664 (the "'664 Patent"),

U.S. Patent No. 8,923,846 (the "'846 Patent"), U.S. Patent No. RE42,883 (the "'883 Patent").[1]

For ease of review, Comcast provides the patents as Exhibits 1-6, respectively. *See* Declaration

of Timothy Horgan-Kobelski (attaching all exhibits cited in this brief).

Comcast has identified constructions that will be helpful for clarifying the asserted claims

for the jury and that are firmly grounded in the intrinsic evidence. Many of the proposals are

also prompted by plaintiff's infringement contentions, which reveal its intention to apply

inappropriately broad constructions that are not supported by the intrinsic record and inconsistent

with the plain meaning of those terms. Because none of the asserted patents is related to any of

the others, Comcast addresses each patent and its disputed terms in separate sections below.

II.   LEGAL STANDARD

During the claim construction process, courts must focus on the words of the claims.

Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1298 (Fed. Cir. 2014). To define the claims, courts

first consider the intrinsic evidence: the claims themselves, the patent specification, and the

prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313-14 (Fed. Cir. 2005) (en banc).

Claim terms are generally construed according to their ordinary and accustomed meaning as

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[1]   By email of October 12, 2021, the Court granted the parties leave to file opening/response
       briefs of up to 45 pages addressing up to 32 claims and a reply/sur-reply of up to 21 pages.

understood by one of ordinary skill in the art at the time of the invention in the context of the

patent. *Id*. at 1312–13. When the specification reveals a definition given to a claim term that

differs from the plain and ordinary meaning, however, "the inventor's lexicography governs."

Id. at 1316. Extrinsic evidence (including, for example, technical dictionaries and treatises,

expert testimony, etc.) may shed light on the meaning claim terms would have to one of ordinary

skill in the art. *Id*. at 1318.

An element in a claim "may be expressed as a means or step for performing a specified

function without the recital of structure, material, or acts in support thereof." 35 U.S.C. § 112(6)

(pre-AIA). "Generic terms such as 'mechanism,' 'element,' 'device,' and other nonce words that

reflect nothing more than verbal constructs may be used in a claim in a manner that is

tantamount to using the word 'means' because they typically do not connote sufficiently definite

structure and therefore may invoke § 112, para. 6." *Williamson v. Citrix Online, LLC*, 792 F.3d

1339, 1350 (Fed. Cir. 2015) (citation omitted). If the specification fails to disclose to a person of

ordinary skill in the art adequate corresponding structure for a functional term subject to Section

112(6), the term is indefinite. *Id*. at 1351-52.

III.   ARGUMENT

A.   Terms of the '249 Patent

The '249 Patent is related to the problem of delivering high-quality Internet service to an

end user, which has historically been frustrated by "user problems such as congestion (too many

users) and latency (long pauses and delays)." '249 Pat. at 1:29-34. The patent purports to

address this problem by offering "more control by network administrators over the congestion of

their networks." *Id.* at 3:67-4:1. The patent claims to do so with an improved system for routing

traffic through the existing architecture of networks that form the Internet. *Id.* at 4:3-5:39. This

architecture is based on the prior art "Open System Interconnection" (or OSI) model, a

simplified version of which is depicted in Figure 1 of the patent:
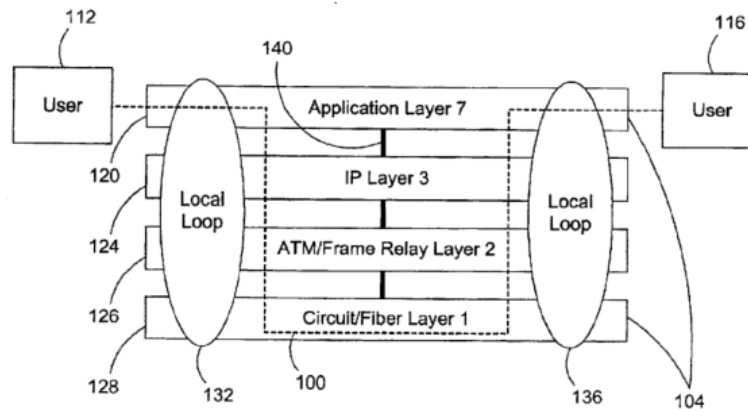
Id. at Fig. 1 (labeled "Prior Art"). The figure depicts the flow of information (*e.g.*, an email)

from User 112 to User 116, with the dashed line representing the path taken by the information

through the OSI model. *Id.* at 4:7-9. At the top layer (layer 7, the "application" layer), one user

sends the email and the other user receives the email; neither user directly interacts with the other

layers in the OSI model. *Id.* at 4:59-64, 6:20-24. The bottom layer (layer 1, the "physical" or

"circuit/fiber" layer) includes the physical communication lines over which bits of data are sent;

at this bottom layer, bits of data comprising the email traverse the network between User 112's

computer and User 116's computer. *Id.* at 4:29-33, 5:48-55. There are multiple physical paths

the data may take to traverse the network, some of which have drawbacks that negatively affect

data transmission (e.g., congestion). *Id.* at 2:7-25, 5:32-39, 7:22-26. The intermediate layers

(layers 2 through 6) perform various functions related to routing the data through the network

and provide the abstractions necessary to convert between the human-readable information sent

at the top (application) layer and the bits of data that are transferred through the network at the

bottom (physical) layer. *Id.* at 4:29-64, 6:20-52. Drawbacks that negatively affect data

transmission may occur in these lower layers of the OSI model as well (e.g., loss of data packets,

bandwidth limitations). *Id.* at 6:43-52, 10:8-12. The patent refers to these drawbacks as "quality

of service event[s]." *Id.* at 10:6-12.

The patent states that in order to resolve "quality of service" events at one layer in the

OSI model, it may be necessary to "adjust provisioning" (*e.g.*, establishing a new circuit or path)

at a lower layer in the OSI model. '249 Pat. at 6:43:52, 15:40-44. That principle forms the basis

for the claimed invention of the '249 Patent, which generally includes the following steps:

(1) monitoring at least one layer in the OSI model; (2) determining that a "quality of service

event" occurred at a particular layer in the OSI model; (3) in response, changing "provisioning"

at a lower layer in the OSI model; and (4) signaling that "provisioning" at the lower layer has

been changed. *See*, *e.g.*, *id.* at 17:55-18:2 (claim 11).

1.   "Open System Interconnection (OSI) reference model layers" (claims 11, 31, 38, 48)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
"layers in a conceptual framework describing different functions in a network system with seven layers, numbered 1 to 7, that respectively correspond to physical, data link, network, transport, session, presentation, and application layers"	no construction required/plain and ordinary meaning

Many jurors are unlikely to be familiar with the OSI model, which is important for

understanding the claims. As explained in the technical background section above, the OSI

model is a layered "conceptual framework describing different functions in a network system

with seven layers" (*i.e.*, the first part of Comcast's proposal). This comports with contemporary

extrinsic evidence. Ex. 7 at 572 (technical dictionary definition of "OSI" as: "The OSI model

organizes the communications process into seven different categories and places these categories

in a layered sequence based on their relation to the user."). The remainder of Comcast's

proposal—which identifies the seven layers—Comcast's is drawn directly from the specification.

'249 Pat. at 4:28-64 ("The physical layer 228 is layer 1…."; "The data link layer 224 is layer

2….”; “The network layer 220 is layer 3….”; “The transport layer 216 is layer 4….”; “The

session layer 212 is layer 5….”; “The presentation layer 208 is layer 6….”; “The application

layer 204 is layer 7….”), 4:12-18 (identifying the same seven layers). This aspect of Comcast’s

proposal is also consistent with relevant extrinsic evidence. Ex. 7 at 572-73 (technical dictionary

definition of “OSI” with descriptions of the names and functions of each of the seven layers).

2. “monitor[ing] at least one OSI reference model layer” (claims 11, 29, 30, 31, 38, 48)

Comcast’s Proposed Construction	Plaintiff’s Proposed Construction
“monitor[ing] the communication resources associated with at least one OSI reference model layer to track quality of service events”	no construction required / plain and ordinary meaning

The entirety of the limitation in which this claim term appears is: “monitoring at least one

OSI reference model layer functioning in the multi-layered network.” *See, e.g.*,’249 Pat. at claim

11. As an initial matter, Comcast’s proposal clarifies <u>what</u> is being monitored. The bare claim

language recites monitoring an “OSI reference model layer,” whereas Comcast’s proposal

clarifies that “the communication resources associated with” at least one such layer are being

monitored. That clarification is warranted because an OSI model layer is a logical construct used

in conceptualizing the network—it is not something that can be “monitored” in any concrete

sense. Rather, it is the *communication resources* associated with a layer (*i.e.*, the communication

hardware or software) that are monitored, as confirmed by the specification as it explains the

“monitoring” step (*i.e.*, the thing “monitored” is a “communication resource”—hardware or

software—and not an abstract OSI layer):

> For example, the network monitor 308 may focus its interest on the network layer
> (layer 3) of the OSI reference model by *monitoring routers and/or any other*
> *device* associated with the IP protocol. Similarly, the network monitor 308 may
> focus its interest on the physical layer (layer 1) of the OSI model by *monitoring*
> *fiber lines, cable lines, and the like*. Moreover, the network monitor 308 may
> focus its interest on the application layer (layer 7) of the OSI model by
> *monitoring application programs and the like*.

Id. at 9:19-29; *see also id.* at 10:4-7 ("The network monitor 308 may ***monitor the***

communication resources of the various network elements 314…."), 9:30-50 (similar).[2]

In addition, Comcast's proposal clarifies the purpose of the monitoring step: "to track

quality of service events." This clarification is warranted because it will assist the jury in

understanding what action must be performed in order for the "monitoring" step to be satisfied.

Consistent with Comcast's proposal, the specification explains that the purpose of the

"monitoring" step is to track, search for, or otherwise identify "quality of service events." *E.g.*,

'249 Pat. at 10:4-7 ("The network monitor 308 may monitor the communication resources of the

various network elements 314 ***searching for quality of service events***."), 10:15-18 ("[T]he

network monitor 308 searches for [error seconds, *i.e.* a "quality of service event"]…."), 11:10-

13 ("[T]he network monitor 308 may ***monitor a network element 314 for severely errored***

seconds [*i.e.*, a "quality of service event"]…."), 15:9-11 ("[T]he network monitor 308 may

continue to monitor the network element 314, ***waiting for quality of service events to occur***.").

3. "quality of service event" (claims 11, 15, 17, 18, 19, 31, 32, 41, 48, 49)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
"event that affects the quality of service of data being sent across a communication system such as error seconds, unavailable seconds, packet loss rate, transmission time (latency), jitter (deviations from an expected value), and bandwidth throughput"	no construction required / plain and ordinary meaning *alternatively, if construed,* "event that affects the quality of service of data being sent across a communication system"

The specification defines the term "quality of service event" in the following passage:

> Generally, a quality of service event may be defined as any event that effects the
> quality of service of data being sent across a communication system. Some
> exemplary quality of service measurements include error seconds, unavailable
> seconds, packet loss rate, transmission time (latency), jitter (deviations from an
> expected value), bandwidth throughput, and the like.

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[2]   All emphasis is added in this brief unless otherwise indicated.

'249 Pat. at 10:7-12. The Court should construe this term because jurors are unlikely to be

familiar with the technical concept of a "quality of service event" without a some explanation.

Although both parties' proposed constructions for this term draw from the first sentence of the

above passage, Plaintiff's alternative proposed construction stops there. By dropping the second

sentence from the specification's definition, Plaintiff's proposal is essentially circular and

unhelpful for the jury (*i.e.*, according to Plaintiff, a "quality of service event" is merely "an event

that affect quality of service"). In contrast, Comcast's proposal also draws (verbatim) from the

definitional language in the specification and provides concrete examples of "quality of service

events" that will assist the jury in determining whether the "quality of service event" limitation is

met.

4.   "provisioning" / "provisioned" (claims 11, 15, 19, 31, 38, 48, 49)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
This term should be construed in the context of each claim, as Comcast has proposed below for terms 5, 11, and 12. To the extent the term is construed in isolation, it should be construed to mean "establishing a new circuit or path" when used as a verb and "configuration, operation, characteristics, or properties of communication resources in the network" when used as a noun.	*noun:* "connectivity" *verb:* "establishing connectivity [for]/[with]"

In computer networking, the terms "provision," "provisioned," and "provisioning" are

commonly used but their technical meaning is often context-specific. Comcast has therefore

proposed that where the parties have a dispute as to claim scope that implicates one of these

words, the claim phrase as a whole should be construed. To the extent the Court construes these

terms as individual words, the Court should adopt Comcast's proposal, which is based on the

way the terms are used in the patent. *See*, *e.g.*, '249 Pat. at 14:56-61 (as a verb: "[T]he network

controller may respond to the quality of service event in a multi-layered network by changing the

network provisioning at a layer less than N. [T]his may be accomplished by ***provisioning an***

additional circuit or path….”), 14:66-15:3 (as a noun: “[F]or the purpose of the present invention, any change in the *configuration, operation, characteristics, properties, etc. of communication resources* in a network may be described as a change in network provisioning.”). In contrast, Plaintiff’s proposed construction is apparently based on a 2021 product website—a reference that is both non-contemporaneous with the ’249 Patent and is not of the type that a person of ordinary skill in the art (“POSITA”) would consult when trying to ascertain the meaning of a claim term. *See* Ex. 8 at 5-6.

> **5.   “signaling that the network provisioning…has been changed” (claims 11, 31, 48, 49)**

Comcast’s Proposed Construction	Plaintiff’s Proposed Construction
“sending a signal to a network monitor indicating that the change in network provisioning is complete”	*see* “provisioning” no additional construction required

The final step of the claimed method reads: “signaling that the network provisioning at the layer less than N has been changed.” *E.g.* ’249 Pat. at claim 11. Comcast’s proposal clarifies that the claimed signal (i) is sent to a network monitor and (ii) signals that the change in network provisioning is complete. These clarifications will assist the jury in determining whether prior art or an accused product meets this claim limitation. Without these clarifications, the term is ambiguous because it does not explicitly recite where the signal is to be transmitted and what “change” in provisioning the signal must indicate. Comcast’s proposal is consistent with the specification’s only two statements that refer to “signaling” that network provisioning has been changed. Both of these statements explain that the signal is sent to a network monitor and that the signal reflects that the change in provisioning is complete. *See id.* at 15:4-7 (“At block 416, if the network provisioning has been changed at the OSI layer less than N, the network controller 304 may *signal the network monitor 308 that the change in the network provisioning is*

complete."), 15:62-67 ("As described above, *once the change in network provisioning is complete*, the network controller 304 may *send a signal to the network monitor* **308**….").

In addition, the specification describes what happens after this signal is sent to the network monitor: once "the network controller 304 [has] signal[led] the network monitor 308 that the change in network provisioning is complete[, t]he network monitor 308 may then update the resource database 312 with the change in network provisioning, and the network monitor 308 may continue to monitor the network element 314, waiting for quality of service events to occur." *Id.* at 15:7-11. In other words, the specification describes a process in which network provisioning is changed in response to a quality of service event, the network monitor receives a signal that the change is complete, and the network monitor then monitors for the next event to which the system must respond. *See id.* Thus, Comcast's proposal merely reflects the description of the purported invention in the specification.

6. "balancing data traffic throughout the network" (claims 32, 33)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite	no construction required / plain and ordinary meaning *alternatively, if construed,* "adjusting the load of data traffic throughout the network"

Claims 32 and 33 (and the independent claim from which they depend) require that a quality of service event be resolved by "balancing data traffic throughout the network." This claim term is indefinite because it fails to have sufficient metes and bounds to inform a person of ordinary skill in the art as to its meaning for two independent reasons. Jeffay Decl. ¶¶ 28-29. *First*, a POSITA would not understand what degree of "balance" is necessary to satisfy the requirement that the traffic be "balanced." *Id.* ¶ 28. The term "balance" implies "equalization," but without further guidance a POSITA would not understand whether this phrase refers to complete equalization of traffic, partial equalization of traffic, or something in between. *Id.*

Second, a POSITA would not understand the scope of balancing traffic "throughout the network" as recited. *Id.* ¶ 29. The claimed invention is intended to be implemented in connection with networks as large as the Internet, and yet it would be nonsensical to a POSITA for the claims to require that traffic be balanced "throughout the Internet." *Id.* To the contrary, the architecture of computer networks constrains how traffic may be routed and hence "balanced" in the network: the very nature of computer networks is that some information flows must be *un*-balanced because they transmit information from certain network ingress points to certain egress points, necessarily creating an imbalance in the data traffic. *Id.* ¶ 29.

The specification has only two references to "balancing" traffic, and neither cures the defects. '249 Pat. at 14:47-48 ("[T]he network controller 304 may use MPLS to balance or distribute the traffic load across the network."), 13:66-14:2 ("[T]he network controller 304 may change the network provisioning by balancing the transmission load carried between the first and second STM-1 lines."). Neither passage informs a POSITA as to the meaning of this claim limitation with reasonable certainty, as neither provides any further explanation of the patent's use of the word "balancing" beyond its use in the claims. Jeffay Decl. ¶¶ 26-28.

7.   "shortest possible path" (claim 33)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite	no construction required / plain and ordinary meaning *alternatively, if construed,* "a path selected by a shortest-path algorithm"

Claim 33 recites the step of "routing time sensitive data through the shortest possible path in the network." The term "shortest possible path" is indefinite because it fails to have sufficient metes and bounds to inform a person of ordinary skill in the art as to its meaning for two independent reasons. Jeffay Decl. ¶¶ 34-35. *First*, although the words "shortest" and "path" suggest optimizing a route through the network, the specification provides no guidance as to

what metric must be optimized to achieve the claimed "shortest possible path." *Id*. ¶ 34. There

are a number of different metrics that might be optimized in order to achieve a "shortest path"—

such as distance, cost, number of hops, or some weighted combination of factors. *Id*. ¶ 34. Yet

the specification uses the term "shortest path" in only one instance that provides no guidance

about what metric must be optimized. '249 Pat. at 14:49-52 ("[T]he network controller 304 may

resolve a quality of service event using MPLS by ensuring that the offending data packet traverse

the shortest path possible to reach their destination."). Because the claim and specification fail to

identify any metric that must be optimized, a POSITA would not know with reasonable certainty

if a given path is the "shortest possible path" or not. Jeffay Decl. ¶ 34.

   Second, this claim term uses the atypical phrase "shortest ***possible*** path" instead of the

more common phrase "shortest path." Jeffay Decl. ¶ 35. Here, use of the term "possible"

suggests that there is some degree of probability or uncertainty that must be assessed before one

can determine if the limitation is satisfied, and the specification gives no guidance on how this

degree of probability or uncertainty should be assessed. *Id*. In other words, it is unclear whether

a path must be the single "shortest" path through the network (however that is to be measured) in

order to satisfy this limitation, or whether something lesser would suffice. *Id*.

   8. **"means for monitoring at least one OSI reference layer functioning in the multi-layered network" (claim 49)**

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Function: monitoring at least one OSI reference layer functioning in the multi-layered network Structure: network monitor 308 performing one of the following two processes: (1) continually polling communication resources associated with the OSI layer being monitored by sending update requests to the communication resources at predetermined intervals; or (2) receiving alert signals sent by the communication resources when predetermined alert thresholds are met.	Function: monitoring at least one OSI reference model layer functioning in the multi-layered network Structure: standalone or integrated network monitor with hardware and software components, and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '249 pat., col. 7:48-67, 8:6-10, 9:12-10:6, 10:65-67.

The parties agree that this term is subject to Section 112 ¶6 and identify the same function. The parties disagree as to whether the specification must disclose an algorithmic structure, and if so, what the algorithmic structure for this function is. On the first point, the recited function is implemented in a computer (Jeffay Decl. ¶ 39), so the specification must disclose an algorithm for performing the claimed function. *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

On the second point, Comcast's proposal correctly identifies the algorithmic structure. Comcast's proposal is a subset of the disclosures cited by Plaintiff and excludes Plaintiff's citations to irrelevant portions of the specification. Jeffay Decl. ¶ 42. For example, the additional excerpts cited by Plaintiff include content about the network monitor "maintain[ing] an updated organized listing of the resources available in the network" and "correlat[ing] the information of the various communication links 318 and present[ing them] to the resource database 312 in a logical manner." '249 Pat. at 8:6-10, 7:47-59. A POSITA would not consider these to be part of an algorithm for "monitoring" at least one OSI reference layer. Jeffay Decl. ¶ 42. They should not be included in the Court's construction.

9. "means for determining that a quality of service event has occurred in the multi-layered network" (claim 49)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite Function: determining that a quality of service event has occurred in the multi-layered network Structure: none disclosed	Function: determining that a quality of service event has occurred in the multi-layered network Structure: standalone or integrated network monitor with hardware and software components, and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '249 pat., col. 9:40-50, 10:13-37, 11:1-67.

The parties agree that this term is subject to Section 112 ¶6 and identify the same function. The parties disagree as to whether the specification must disclose an algorithmic

structure, and if so, whether the specification discloses a sufficient algorithmic structure. Again, this function is implemented in a computer (Jeffay Decl. ¶ 45), so the specification must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333. However, because the specification fails to disclose an algorithm for performing function, the term is indefinite. *Williamson*, 792 F.3d at 1350. The three passages cited by Plaintiff relate respectively to (1) monitoring communication resources ('249 Pat. at 9:40-50), (2) different metrics that may be monitored (*id.* at 10:13-37), and (3) *the fact* that the network monitor may determine that a quality of service event has occurred, but not *an algorithm* for doing so (*id.* at 11:1-67). Jeffay Decl. ¶¶ 46-49. Neither Plaintiff's cited passages nor any others in the specification disclose an algorithm for "determining that a quality of service event has occurred in the multi-layered network" as claimed. *Id.* ¶¶ 46-50.

> **10.**   **"means for determining that the quality of service event occurred at a layer N in the OSI Reference Model" (claim 49)**

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite Function: determining that the quality of service event occurred at a layer N in the OSI Reference Model Structure: none disclosed	Function: determining that the quality of service event occurred at a layer N in the OSI Reference Model Structure: standalone or integrated network monitor with hardware and software components, and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '249 pat., col. 9:40-50, 10:13-37, 11:1-67.

The parties agree that this term is subject to Section 112 ¶6 and identify the same function. Again, this function is implemented in a computer (Jeffay Decl. ¶ 53), and therefore the specification must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333. And again, the specification fails to disclose an algorithm that performs the claimed function rendering the term indefinite. *Williamson*, 792 F.3d at 1350. The three specification passages cited by Plaintiff are the same as those cited for '249 Patent Term 9 and

fail to disclose an algorithm for the same reasons described with respect to that term. *See*

Section III.A.9, above; *see also* Jeffay Decl. ¶¶ 53-56. And while one excerpt from those

passages states that "the network monitor 308 may use the resource database 312 to determine

where in the OSI reference model the quality of service event occurred," the excerpt says only

that "resource database 312" is used in making the determination—it does not disclose how any

determination is made. Jeffay Decl. ¶ 55.

11. **"means for responding to the quality of service event in the multi-layered network by changing network provisioning at a layer less than N" (claim 49)**

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Function: responding to the quality of service event in the multilayered network by changing network provisioning at a layer less than N Structure: network controller 304 performing one of the following two processes: (1) changing network provisioning by activating additional lines, thereby increasing the bandwidth between first and second users; or (2) adjusting the load on previously activated lines such that the connection between first and second users is allotted additional bandwidth	Function: responding to the quality of service event in the multilayered network by changing network provisioning at a layer less than N Structure: standalone or integrated network controller with hardware and software components, and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '249 pat., col. 12:11-16:20. *see* "provisioning"

The parties agree that this term is subject to Section 112 ¶6 and identify the same

function. The function is implemented in a computer (Jeffay Decl. ¶ 59), so the specification

must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333.

Comcast's proposal correctly reflects the algorithms disclosed in the specification. *See* '249 Pat.

at 13:29-34 ("[T]he network monitor 308 has changed the network provisioning in the

communication system 500 by activating third and fourth STM-1 lines 548, 552, thus, increasing

the bandwidth between the first and second users...."—i.e., the first half of Comcast's proposal),

14:3-8 ("[T]he network controller 304 may adjust the load on the first and second STM-1 lines

540, 544, such that the connection between the first and second users 504, 516 is allotted

additional bandwidth."—i.e., the second half of Comcast's proposal); Jeffay Decl. ¶¶ 60-61. By

contrast, Plaintiff's proposal cites over four columns of text as the purported algorithm, including

irrelevant content such as how various communication links are organized in a database ('249

Pat. at 12:10-42), actions taken by the network monitor after provisioning has changed (*id.* at

15:4-11), and a boilerplate reservation of rights paragraph (*id.* at 16:1-20). A POSITA would not

consider these to form part of an algorithm for responding to a quality of service event (Jeffay

Decl. ¶ 62), and they should not be included in the Court's construction.

12. "means for signaling that the network provisioning at the layer less than N has been changed" (claim 49)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite Function: signaling that the network provisioning at the layer less than N has been changed Structure: none disclosed	Function: signaling that the network provisioning at the layer less than N has been changed. Structure: standalone or integrated network controller with hardware and software components, and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '249 pat., col. 8:17-43, 15:4-11, 15:63-67. *see* "provisioning"

The parties agree that this term is subject to Section 112 ¶6 and identify the same

function, which is implemented in a computer (Jeffay Decl. ¶ 65). The specification therefore

must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333.

But it fails to do so. The first passage cited by Plaintiff relates to various devices and software

that may be used to communicate between network elements but recites no algorithm or series of

steps at all. '249 Pat. at 8:17-43; Jeffay Decl. ¶ 67. The other two passages state only the fact

that the network controller may perform the function of "signaling that the network provisioning

at the layer less than N has been changed," but the passages do not provide an algorithm or series

of steps for doing so. '249 Pat. at 10:13-37, 15:63-67; Jeffay Decl. ¶¶ 68-69.

B.   Terms of the '465 Patent

The '465 Patent claims an invention in the field of "detecting priority of data frames in a [computer] network." '465 Pat. at 1:15-16. In particular, the claimed invention takes advantage of something known as the Contention Free Period ("CFP"), "which is a period of transmission time that is free from normal contention based airtime reservation." *Id.* at 1:24-27. "The purpose of this CFP is that it can be used for delivering high priority traffic, which has higher real time requirements than normal traffic." *Id.* at 1:37-39. However, the industry standard cited in the patent did not specify "how some data traffic should be identified as high priority traffic" so all data traffic was treated equally. *Id.* at 1:41-45, 2:10-15.

To provide a mechanism for detecting priority data frames, the '465 Patent recites the following steps to perform the claimed invention: (1) extracting a bit pattern (labeled BP in the figure below) from a predetermined position in a data frame; (2) comparing the extracted bit pattern with a search pattern (labeled SP below), and (3) identifying the received frame as a priority frame in case the extracted bit pattern matches with the search pattern. '465 Pat. at 2:24-29. The networking device receives a value known as an "offset" (labeled as OS below), which defines the predetermined position in the data frame where the bit pattern and search pattern can be found and extracted. *Id.* at 3:1-10. Figure 3 illustrates the claimed invention:
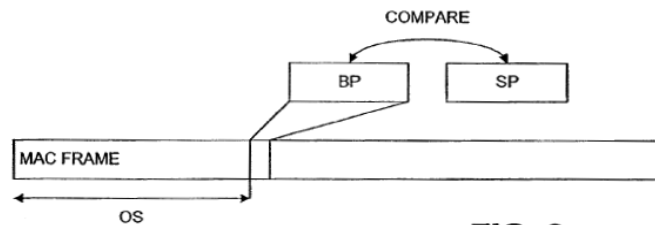
FIG. 3

Id. at Fig. 3. The identified priority data frames are forwarded to a priority queue where they are transmitted during CFP at a faster rate than normal (non-priority) frames. *Id.* at 3:51-55. The

claimed mechanism renders it unnecessary to process and analyze the received frame to obtain

priority information. *Id.* at 2:48-50.

1. "identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern" (claims 1, 6, 7)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
identifying a received frame as a priority frame based solely on said bit pattern and said search pattern being identical	no construction needed/plain and ordinary meaning

The claimed invention detects priority in data frames "by comparing a corresponding bit

pattern with a search pattern without further processing of the received frame." '465 Pat. at

2:39-42. By comparing the bit pattern to the search pattern to look for a match, the '465 Patent

extols that "it is not necessary to process and analyze the received frame, i.e., to process higher-

level layers in order to obtain priority information." *Id.*, at 2:48-50.

Comcast's proposed construction preserves the purpose of the claimed invention and

provides needed clarity to the jury on when a received data frame is identified as a priority

frame. The specification illustrates that a match exists when the extracted bit pattern is identical,

i.e., has the same exact sequence of 0's and 1's, to the search pattern. Figure 5 illustrates this:
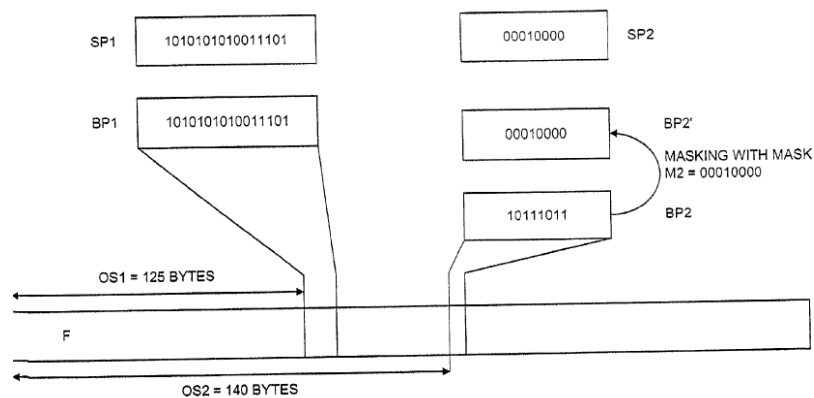
FIG. 5

Id. at Fig. 5. Here, the first extracted bit pattern (BP1) is compared to the first search pattern

(SP1). "As illustrated, the first bit pattern matches with the first search pattern SP1." *Id*. at 7:15-

16. The two patterns are identical in their sequence of 0's and 1's. Similarly, the specification states that "the second pattern SP2 and masked bit pattern BP2' match," and once more, the exact sequences of 0's and 1's are identical. *Id.* at 7:21-24. That a match means the bit patterns must be identical makes sense considering that the patent states no additional processing beyond the comparison of a bit pattern with a search pattern of the received frame is needed to determine the priority of the received data frame. *Id*. at 2:39-42; 2:48-50.

2.   "priority frame" (claims 1, 6, 7)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
data frame that is given higher priority in traffic handling than other data frames	no construction needed/plain and ordinary meaning

Comcast proposed a construction for the technical term "priority frame" to assist the jury in understanding the claims. "[A]ccording to the method of the invention, certain traffic can be defined to *have higher priority than other traffic* when it is handled in an IEEE 802.11 WLAN Access Point (AP)." '465 Pat. at 2:57-60. Once a received frame is identified as a "priority frame," it can be forwarded to a priority queue for handling priority traffic where "the priority queue serves to transmit the data priority frames in the network faster than normal frames." *Id.* at 3:49-53; *see also id.* 7:27-47 (explaining that a high priority frame is placed into a priority queue for traffic handling), Fig. 6 (depicting at steps S64 and S65 that, upon a match of the bit pattern with the search pattern, the frame is identified as priority and sent to a priority queue).

Technical dictionaries available at the time of the claimed invention also define "priority," in the context of data communications, as "a ranking given to a task which determines when it will be processed." Ex. 9 at 625. Similarly, a "priority indicator" is a "character or group of characters which determine the position in queue of the message in relation to the urgency of other messages. Priority indicators control the order in which messages are to be

delivered." *Id.* Thus, Comcast's proposed construction is consistent with both the intrinsic and extrinsic evidence.

3.   "offset" (claims 1, 6, 7)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
numerical value indicating a number of bits from the beginning of the data frame	no construction needed/plain and ordinary meaning

Absent a claim construction, the term "offset" as used in this patent to describe processing network data packets is not readily understandable to a jury. Comcast's proposed construction provides the necessary clarity, based on the patent specification, that offset is (i) a numerical value, and (ii) that the value refers to the number of bits from the beginning of the data frame. The offset allows a router or access point to know at what predetermined location in the data header is the extracted bit pattern located. '465 Pat. at 3:1-4. Figure 3 (reproduced on page 16, above) illustrates the concept. The '465 Patent explains that "[t]he position of the bit pattern to be extracted is defined by the offset OS from the start of the MAC frame, as shown in FIG. 3." *Id.* at 5:36-38. As illustrated, the offset measures the predetermined location from the beginning of the data frame.

Figure 5 (reproduced on page 17, above) and its related text, provide another example. The first bit pattern (BP1) is stored in a predetermined location in the data frame. The first offset (OS1) is 125 bytes, measured from the beginning of the frame.[3] *Id.*, at 7:13-15. The second bit pattern (BP2) is stored in another predetermined location in the frame, indicated by the second offset (OS2) at 140 bytes from the beginning of the frame. *See also id.* at 11:26-37 (another example of an offset measured in bytes from the beginning of a frame).

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[3] Comcast's proposed construction uses bits as the unit of measurement (where 1 byte is equal to 8 bits) to allow for even more precise determination of location and because the bit patterns and search patterns found in the claims are measured in bits.

Finally, technical dictionaries available at the time of the claimed invention confirm that an offset, in the software context, referred to "a number that must be added to a relative address [here, the beginning of a data frame] to determine the address of the storage location to be accessed." Ex. 10 at 711.

4.   "high priority queue" (claim 7)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
queue reserved exclusively for high priority frames	no construction needed/plain and ordinary meaning

A construction is necessary here to resolve the dispute about whether a "high priority queue" is reserved exclusively for high priority data frames (as proposed by Comcast) as opposed to a queue for high priority and normal traffic (apparently advocated by Plaintiff). The specification resolves the dispute by explaining that the "high priority queue" is reserved exclusively for high priority frames. The claim term "high priority queue" only appears in connection with one particular embodiment: "According to the second embodiment, the frame F which *has been detected as a priority frame*, is transmitted in the Contention Free Period (CFP). *That is, it is put on a high priority queue*. This process is described in the following by referring to the flow chart shown in FIG. 6." '465 Patent at 7:27-31. Figure 6 is reproduced here:
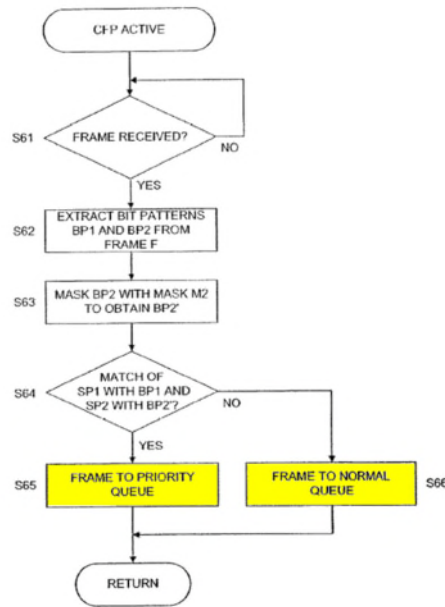
Id. at Fig. 6 (illustrating separate, mutually exclusive queues for priority frames and normal frames). "Then, in step S64, it is checked whether both bit patterns BP1 and BP2′ match with the search patterns SP1 and SP2, respectively. If SP1 and BP1, and SP2 and BP2′ respectively match, it is decided that the received frame F is a high priority frame, and the ***frame F is put in the priority queue (step S65)***." *Id.* at 7:42-47. The patent further confirms that "[i]f the patterns do not match (NO in step S64), the received frame F [non-priority data frame] is ***put in the normal queue, as shown in step S66***." *Id.*, at 7:48-50. Thus, Comcast's proposed construction properly resolves this dispute in accordance with the patent's intrinsic disclosures.

C.   Terms of the '285 Patent

The '285 Patent relates to "access provisioning between one or more wireless devices and an intranet access point." '285 Pat. at 1:16-17. In particular, the '285 Patent states that many then-existing methodologies for provisioning wireless devices were "impractical." *Id.* at 3:13-19. Thus, the patent posited "it would be advantageous that such a wireless access provisioning system be integrated with easily monitored parameters of a wireless device, such as the time monitoring of power on and/or start of signal transmission." *Id.* at 3:50-53.

To achieve this potential advantage, the '285 Patent describes the claimed invention as "time-based provisioning of wireless devices," as seen in the Title, Abstract, and Summary of Invention. '285 Pat. at Abstract, 3:62-63. This time-based provisioning is accomplished by having "[a] network access point monitor[] operation of wireless devices within a service region." *Id.* at 3:63-65. Next, "[w]hen a provisioning logic is activated at the network access point, the access point determines if the tracked parameter, such as the power on, of the wireless device occurs within a designated time interval from the time of the provisioning activation." *Id.* at 3:65-4:2. "If the tracked device qualifies, the network access point proceeds with provisioning the device." *Id.* at 4:2-4:3. "When a wireless device to be authorized is powered on, the provisioning logic at the network access point notes the power on time." *Id.* at 4:5-6. This provisioning process is depicted in Figures 3 and 4. The specification and several of the dependent claims describe additional security features that are based on the time-based aspect of this invention where provisioning is denied due to a tracked operating parameter occurring before or after the time interval or occurring repeatedly. *Id.* at 6:12-21; 6:66-7:10, 8:21-25, Figs. 5-6, claims 4, 5, 25, 26, 46, 47.

1. "tracking an operating parameter of the wireless device within a service area" (claims 1, 22, 43)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
monitoring and noting the time of an operating parameter of the wireless device within a service area	*see* "operating parameter" no additional construction required

Comcast's proposed construction ensures that this claim phrase is understood by the jury to contain the necessary elements needed to perform the claimed invention. In this particular "tracking" step of independent claims 1, 22, and 43, the specification explains that tracking of an operating parameter is performed by monitoring and noting the time of an operating parameter.

Both parties appear to agree that the word "tracking" is synonymous with "monitoring." In a parallel litigation filed in New York involving the same claim phrase from the '285 Patent, Plaintiff argued in a claim construction brief that the word "tracking" "is well understood to refer to 'following' or 'monitoring.'" Ex. 11 at 10. The patent's Abstract provides further support by stating that "[a] network access point ***monitors operation of wireless devices*** within a service region." '285 Patent at Abstract. The specification also equates the tracking of operating parameters with monitoring those parameters: "[I]t would be advantageous that such a wireless access provisioning system be integrated with easily monitored parameters of a wireless device, such as the ***time monitoring*** of power on and/or start of signal transmission." '285 Patent, at 3:50-53 (emphasis added). Thus, the proposer construction should including the concept of "monitoring" a parameter.

It is equally important for the jury to understand that, according to the '285 Patent, the time an operating parameter occurred is also tracked. The claim language itself requires such a construction. In all the instances where this claim phrase appears (claims 1, 22, and 43), the claims recite, in a second limitation, that provisioning be initiated if the tracked operating parameter occurred within a time interval. To determine whether a tracked operating parameter occurred within a time interval, there must be a tracking of when the operating parameter occurred. This construction is further supported by the dependent claims, which add features such as the prevention of wireless device provisioning "if the tracked operating parameter occurs outside the time interval, comprising any of before the time interval and after the time interval." *Id.* at claims 4, 25, 46. Such features would only be available if the tracking of the operating parameter included noting the time that an operating parameter occurred, which makes the notation of time an essential element of this claimed invention. *See Andersen Corp. v. Fiber*

Composites, LLC, 474 F.3d 1361, 1367 (Fed. Cir. 2007) (upholding construction naming

physical properties of the claimed composite composition because the properties are critical

elements in the process that produces those properties).

The specification and the title describe the claimed invention as being a "time-based

provisioning of wireless devices." Every figure and every embodiment in the '285 Patent refers

to time-based provisioning. To perform this "Time-Based Provisioning Process," the '285 Patent

states that "the network access point 12 *tracks 54 the power on time of wireless devices 14*,

whereby the powered wireless device begins transmission of a reverse link signal 28. When a

wireless device 14 to be authorized is powered on 56, the provisioning logic 44 at the network

access point 12 *notes the power on time 82* (FIG. 5)." *Id.* at 5:36-43; *see also id.* at Abstract,

4:5-6, 5:66-6:2, 6:12-15, 6:31-34; 6:57-60, 6:66-7:4 (repeating that the "power on time" is

noted), 6:51-55 (tracks "power on 56 of wireless devices *as a function of time*"), Figs. 3-4

(determining whether there is a "*recent power on* of a wireless device" in step 60). The patent

further explains how the tracking of time is needed so that wireless devices that powered on

within a specific time interval are provisioned and devices that powered on outside the time

interval would not be provisioned. *Id.* at 5:46-62, 6:39-51, Figs. 5-6 (depicting acceptance time

intervals and devices powered on outside of the time interval being "unaccepted"). While

Plaintiff may argue that the tracking of time reads embodiments into the claims, that argument

rings hollow here when the tracking of time is necessary to the performance of the invention

found in <u>every claim</u> of the patent. *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1370

(Fed.Cir.2003) ("[T]his court looks to whether the specification refers to a limitation only as a

part of less than all possible embodiments or whether the specification read as a whole suggests

that the very character of the invention requires the limitation be a part of every embodiment.").

2.   "provisioning" (claims 1, 22, 43)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
establishing an authorized communication link	n. connectivity; v. establishing connectivity [for/with]

Comcast's proposed construction hues most closely to the specification. While Plaintiff's proposal seeks to equate provisioning <u>across multiple unrelated patents</u>[4] with any "connectivity," the '285 Patent specification states "the network access point 12 provides time-based ***provisioning to ensure that only authorized wireless devices 14 can operate within the local network 17***, such as within a home HM, and to prevent unauthorized wireless devices 14, such as device 14 n in FIG. 1, from gaining access to the network 17." '285 Pat. at 5:21-26; *see also id.* at 5:30-35 (provisioning system "securely integrates" wireless device), 7:14-21 ("secure provisioning of information between wireless device [and] network access point"), 7:30-38 ("provisioning system 20 readily integrates wireless devices…in a secure fashion"). In fact, the '285 Patent specifically identifies limiting the provisioning to a link between <u>authorized</u> wireless devices and the network access point in the Summary of the Invention and as one of the purported advantages of the claimed invention. *Id.* at 3:42-47 ("it would be advantageous to provide a wireless access provisioning system…whereby other devices within an access system are prevented from being provisioned by the provisioning system"), 4:3-6 (stating in Summary of The Invention that a tracked device has to be authorized to be provisioned). Thus, Plaintiff's

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[4]   In *Monsanto Co. v. Bayer Bioscience N.V.*, the Federal Circuit declined to automatically apply the same claim construction for similar terms in different patents because "similar terms can have different meanings in different patents depending on the specifics of each patent." 363 F.3d 1235, 1236, 1244-45 (Fed. Cir. 2004). Thus, consistent with the Federal Circuit's teaching, Comcast has briefed the proper construction of "provisioning" / "provisioned" in connection with each asserted patent where it is used so that the Court can construe the term in the context of each specific patent. *See* Sections III.A.4, III.A.5, III.A.12 (terms in the'249 Patent) and Section III.D.1 (term in the'664 Patent).

proposal is overbroad while Comcast's proposed construction honors the patent's disclosures and

one of the expressed purposes of the claimed invention. *See Renishaw PLC v. Marposs Societa'*

per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998) ("Ultimately, the interpretation to be given a

term can only be determined and confirmed with a full understanding of what the inventors

actually invented and intended to envelop with the claim.").

3. "[logic for] initiating [provisioning/an association] of the wireless device if the tracked operating parameter occurs within a time interval" (claims 1, 22, 43)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite <u>Function</u>: initiating [provisioning/an association] of the wireless device if the tracked operating parameter occurs within a time interval <u>Structure</u>: None	<u>Function</u>: initiating [provisioning/an association] of the wireless device [with a network] if the tracked operating parameter occurs within a time interval. <u>Structure</u>: access point, comprising a provisioning activation button, time based provisioning logic, access control list, wired network logic, a wired network connection, and a transceiver, and their equivalents. To the extent that disclosure of an algorithm is required, see algorithms disclosed in '285 Patent Figures 1, 3, 4, 5, 6, and corresponding text. See also, '285 pat., Abstract; col. 4:32-44, 5:27-45, 7:14-56. see "provisioning"; *see* "operating parameter"

The parties agree that the terms "initiating provisioning…" (in claim 1) and "logic for

initiating provisioning" (in claims 22 and 43) are subject to the requirements of Section 112 ¶ 6.

The parties also agree on the claimed function.[5] *See* Lanning Decl., ¶ 30. The dispute is whether

the '285 Patent discloses a sufficiently precise description of the corresponding structure that is

clearly associated with the claimed function. *Aristocrat Techs.*, 521 F.3d at 1333; *see also*

Egenera, Inc. v. Cisco Sys., Inc., 972 F.3d 1367, 1374 (Fed. Cir. 2020) (finding that "logic"

should be treated as § 112 ¶ 6 term). The '285 Patent fails to disclose a sufficiently precise

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[5]   The parties do dispute the proper construction of the term "provisioning" that is found in the claimed function, as discussed elsewhere.

description of a corresponding structure that performs the claimed function, and thus, is

indefinite. Figures 3 and 4 illustrates why:
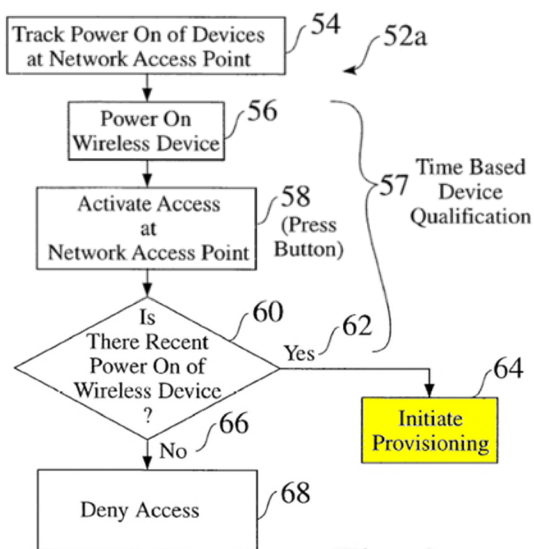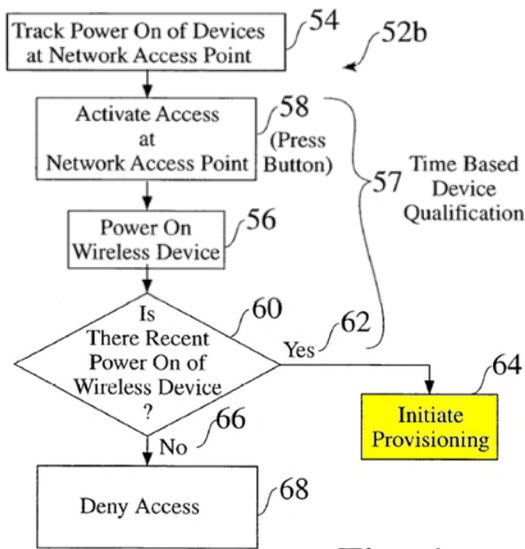
Fig. 3   Fig. 4

'285 Pat. at 4:17-20, 5:63-64, 6:22-26, Fig. 3-4. The step of "initiating provisioning" is a

proverbial black box and thus fails to provide any structure for "initiation provisioning."

Egenera, 972 F.3d at 1374; Lanning Decl. ¶¶ 32-33. The specification refers to step 64 as the

initiating or preventing of provisioning but does not disclose any algorithm for performing this

computer-based operation. *See e.g.,* '285 Pat. at 6:7-11, 6:15-21, 6:40-43, 6:47-51. While

Plaintiff identifies, as the corresponding structure, a network access point that performs the

alleged algorithm found in Figures 1, 3, 4, 5 and 6, none of those figures disclose any sequence

of steps for initiating provisioning. For example, Figure 1 is a schematic view of a floor layout

with computers and wireless devices that lacks any information about initiating provisioning.

Lanning Decl. ¶ 35.

Figures 3 and 4 (reproduced above) illustrate the function as a black box. Step 54 in

these figures refers to the "tracking" step recited as the first limitation in claims 1, 22, and 43.

Id. at 5:38-40. Step 56 refers to the wireless devices powering on, not <u>initiating provisioning</u>.

Id. at 5:40-42. Step 58 and the pressing of an activation button both refer to the activation of the time-based provisioning so that it can be determined whether there was a recent power on from wireless device within an accepted time interval (step 60). *Id.* at 5:43-50. All of these steps must be completed to determine whether a wireless is authorized, and if so, then provisioning is initiated. Lanning Decl. ¶ 34. None describe a sequence of steps for "initiating provisioning." Figures 5 and 6 are timelines for the provisioning process and illustrate portions of the structure for the "means for tracking" (briefed below for claims 22 and 43), but they lack even a cursory reference to "initiate provisioning."

In sum, a personal of ordinary skill in the art reviewing the '285 Patent would not recognize that any sufficiently specific algorithmic structure is disclosed as clearly associated with performing the step of "initiating provisioning" and thus the claim is indefinite. Lanning Decl., ¶ 31; *see also Aristocrat*, 521 F.3d at 1333.

4. "time interval" (claims 1, 4, 13, 14, 22, 25, 34, 35, 43, 46, 54, 55)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
acceptance time interval, otherwise, indefinite	no construction needed / plain and ordinary meaning

The '285 Patent uses time to determine which wireless devices are permitted to join a wireless network. The patent claims repeatedly refer to determining whether a tracked operating parameter of a wireless device occurred within a designated "time interval," in which case the wireless device would be provisioned onto the wireless network, or before or after a "time interval," in which case the wireless device would be denied access. *See, e.g.*, '285 Pat. at Abstract, claims 1, 4, 22, 25, 43, 46. The same concept is found in the specifications, where the "time interval" is referred to as the "acceptance time interval." *Id.* at 5:48-54 ("The network access point 12 determines 60 if there is a recent power on of a wireless device 14, e.g. such as within 5 minutes. ***If the wireless device 14 was recently powered 56, such as within an***

acceptance time interval 74 (FIG. 5), the positive determination logic 62 allows the network

access point 12 to initiate provisioning 64."); *see also id.* at 5:55-62 (denying access to a wireless

device when the wireless device was powered on at a time before the "acceptance time

interval"). Notably, the specification repeatedly refers to the designated "time interval" by

which a tracked operating parameter is compared to as an "acceptance time interval." *Id.* at 6:4-

7, 6:37-51, 6:60-65, Figs. 5-6 (labeled as 74).

    If "time interval" is not construed as an "acceptance time interval," then the term is

indefinite because there is no way to discern what interval of time this term refers to and how the

claimed invention would determine if a tracked operating parameter occurred within or outside

the designated time interval.

> ### 5. "means for tracking an operating parameter of [a] wireless device" (claims 22, 43)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Function: tracking an operating parameter of [a] wireless device	Function: tracking an operating parameter of the wireless device within a service area
Structure: access point, comprising a provisioning activation button, time based provisioning logic, access control list, wired network logic, a wired network connection, and a transceiver, and their equivalents implementing the algorithm depicted in Figs. 5 and 6, items 70a and 70b and described at 5:63-6:7 and 6:52-62.	Structure: access point, comprising a provisioning activation button, time based provisioning logic, access control list, wired network logic, a wired network connection, and a transceiver, and their equivalents. To the extent that disclosure of an algorithm is required, see algorithms disclosed in '285 Patent Figures 1, 2, 3, 4, 5, 6, 7, and corresponding text. See also, '285 pat., col. 5:5-67, 6:1-67, 7:1-10, 7:48-67, 8:1-25. *see* "operating parameter"

    For this means-plus-function term, the parties' disagreement is limited to (i) whether an

algorithm is required, and (ii) what the algorithm is. The Federal Circuit has long articulated that

"the corresponding structure for a §112 ¶ 6 claim for a computer-implemented function is the

algorithm disclosed in the specification." *Aristocrat*, 521 F.3d at 1333 (quoting *Harris Corp. v.*

Ericsson Inc., 417 F.3d 1241, 1249 (Fed. Cir. 2005). Here, the alleged invention in the '285 patent concerns provisioning wireless devices onto a computer network access point ('285 Pat. at 1:13-17), and thus, the corresponding structure must be an algorithm disclosed to perform the claimed function.

The Federal Circuit has previously approved of the definition of "algorithm" as "a fixed step-by-step procedure for accomplishing a given result." *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385 (Fed. Cir. 2011). Plaintiff offers an alternate proposal setting forth its preferred algorithm that differs from Comcast's proposal strictly based on how much to include as the corresponding structure. In fact, the structure identified by Comcast is a narrower subset of the passages proposed by Plaintiff. Thus, the parties agree that Figures 5 and 6, items 70a and 70b, and the passages at 5:63-6:7 and 6:52-62 are part of the corresponding structure for "tracking an operating parameter of a wireless device." The agreed-upon passages discuss in sequence how an enhanced network access point "tracks the power on 56 of wireless device as a function of time 72," notes the start time of the operating parameter, and how the tracked parameter (i.e., power on time) is used to determine whether the device should be authorized for provisioning. In contrast, the additional materials cited by Plaintiff (i.e., 5:5-62, 6:1-51, 7:1-10, 7:48-67, 8:1-25, Figs 1-4, 7) is vastly overbroad. For example, Plaintiff points to Figure 1, which just shows a topology of computers and devices without any disclosure of tracking an operating parameter of a wireless device. Plaintiff also includes passages about conditions upon which provisioning access would be denied (*id*. at 7:1-10, 7:48-64, 8:21-25) that are found in dependent claims such as claims 4, 5, 25, 26, 46, and 47 but not in the independent claims at issue. Thus, Comcast's proposed structure includes only the necessary elements of the algorithm to perform the tracking of an operating parameter of a wireless device. *See Univ. of Pittsburgh*

of Commonwealth Sys. of Higher Educ. v. Varian Med. Sys., Inc., 561 F. App'x 934, 941 (Fed. Cir. 2014) (limiting the algorithm in a mean-plus-function claim to "what is necessary to perform the algorithm").

D.   Terms of the '664 Patent

The '664 Patent relates to systems for determining which path data should traverse to flow from a source network element to a destination network element, either within a network or between multiple networks. *E.g.*, '664 Pat. at cover (entitled "Determining and Provisioning Paths in a Network"). This process was historically performed by modeling the network(s) as a graph, with the network hardware elements represented as graph nodes and the connections between them represented as links. *Id.* at 1:17-31. The patent states that prior art methods for determining paths using such graphs suffered from performance issues due to the large number of nodes and resulting complexity. *Id.* at 2:30-40. The claimed invention purports to address this problem in multi-network scenarios by representing as a link (instead of a node) a common network-connecting device shared between the networks. *Id.* at 3:17-21. The purported benefit is that "since fewer nodes are represented in a network graph of the modeled network, route processing is reduced, resulting in a corresponding reduction in overhead and resources required to route network traffic from one node to another." *Id.* at 3:32-36.

1.   "provisioning" / "provisioned" (claims 1, 2, 4, 7, 8, 9, 12)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
These words should be construed in the context of the claim phrase in which they each appear. To the extent these words are construed in isolation, "provisioning" when used as a verb should be construed as "identifying and establishing a path"; "provisioning" when used as an adjective should be construed as "for identifying and establishing a path"; and "provisioned" should be construed as "traffic was successfully routed to the appropriate destination."	*noun:* "connectivity" *verb:* "establishing connectivity [for]/[with]" "provisioned" means "supplied with connectivity"

As explained for the '249 Patent and '285 Patent, Comcast proposes that where the parties have a dispute that implicates the word "provisioning" or "provisioned," the claim phrase as a whole should be construed because these terms' meanings are context-specific. *See also supra* at fn. 4 (the Federal Circuit has held that similar terms may have different meanings in different patents). To the extent the Court construes these terms as individual words, the Court should adopt Comcast's constructions because they are drawn from the intrinsic record of the '664 Patent. *See* '664 Pat. at 3:17-19 ("the present inventor has invented a **network provisioning system for establishing a path** between two networks"), 7:43-45 ("[the claimed system] identif[ies] how the path across the DCS should be **provisioned to route the traffic to the appropriate destination**"). By contrast, Plaintiff's proposed construction is apparently based on non-contemporaneous and atypical extrinsic sources, as discussed further in connection with '249 Patent Term 4. *See* Section III.A.4, above.

2. "digital cross connect [system]" (claims 1, 3, 4, 6, 7, 9, 13)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
"a device that interconnects networks (or portions of networks), wherein the interconnected networks (or portions thereof) use different protocols or traffic rates"	no construction required / plain and ordinary meaning *alternatively, if construed,* "device that interconnects networks"

This limitation is recited in all independent claims and was added during prosecution to overcome prior art rejections. The court should adopt Comcast's proposal, which reflects this intrinsic history and would assist jurors in understanding this technical term. By contrast, Plaintiff's proposal should be rejected because it is inconsistent with the file history, the specification, and a POSITA's ordinary understanding.

As originally drafted, the claims recited a "common network device" instead of a "digital cross connect [system]." Ex. 12 at 13. These claims were subject to multiple rejections as anticipated by U.S. Patent No. 6,981,065 ("Lu"). Ex. 13 at 5; Ex. 14 at 2. The applicant then

amended the claims to recite a "digital cross connect [system]" instead of a "common network

device." Ex. 15 at 2. The applicant argued that this amendment rendered the claims patentable

over Lu because Lu's "shared network node"—which the applicant acknowledged

interconnected networks and provided a "routing procedure…capable of crossing network

boundaries"—"is not the same as or equivalent to a 'digital cross connect system.'" Ex. 16 at 7.

The applicant thereby represented to the examiner that a "digital cross connect [system]"

requires more than simply interconnecting networks, and yet that previously-disclaimed

construction is now the one Plaintiff proposes.[6] *See id.* As yet further confirmation that a

"digital cross connect [system]" requires more than simply interconnecting networks: original

dependent claim 2 recited "wherein said common network device comprises a digital cross

connect system," and this dependent claim was cancelled when the applicant amended

independent claim 1 to recite a "digital cross connect [system]" instead of a "common network

device." Ex. 12 at 13; Ex. 15 at 2.

Comcast's proposed construction is consistent with this prosecution history and is drawn

from the passage of the specification that explains what a "digital cross connect" (or "DCS") is.

The table below shows Comcast's proposed construction compared to that passage:

Comcast's Proposed Construction	'664 Pat. at 5:21-25
"a device that interconnects networks (or portions of networks), wherein the interconnected networks (or portions thereof) use different protocols or traffic rates"	As used herein, a DCS is any device that interconnects networks to facilitate traffic routing from one network to another or to link portions of networks using one protocol or traffic rate to another portion using a different protocol or rate.

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[6] The applicant ultimately overcame all prior art rejections by adding a "cross connection status database." Ex. 17 at 2; Ex. 18 at 2. A "digital cross connect" was a necessary prerequisite to that amendment because the allowed claims require the "cross connection status database" to store information about the digital cross connect. '664 Pat. at 8:21-25 (claim 1) ("a cross connection status database configured to store a status . . . indicat[ing] whether a cross-connection ***using said digital cross connect*** was successfully provisioned" (emphasis added)).

Notably, Comcast's interpretation of this passage is consistent with that of the examiner, who noted: "the claimed limitation of 'digital cross connect system DCS' according to pages 7-8, paragraph 20 of the original specification simply defines the well known DCS to any device that interconnects networks to facilitate traffic routing from one network to another…using different protocol or rate." Ex. 19 at 5 (ellipses in original). Although Plaintiff's proposal is apparently based on this passage as well, its proposal is defective for the additional reason that it uses only the five-word phrase "any device that interconnects networks" and ignores the remainder of the passage. Plaintiff's proposal ignores still other passages of the specification indicating that a "digital cross connect" is not simply a device that interconnects networks and instead has the specific characteristics set forth in Comcast's proposal. *See*, *e.g.*, '664 Pat. at 5:16-21 ("[D]ifferent networks rely on different protocols, operate at different speeds and may even operate using a different physical medium (e.g., copper vs. optical fiber). In order to interconnect such networks, DCSs or other similar devices . . . are used."), 5:25-28 ("DCSs are very well known in the art and serve to efficiently manage disparate traffic protocols and line speeds…."). Finally, Comcast's proposal is also consistent with the meaning that a POSITA would attribute to the term "digital cross connect" or "DCS" even beyond the context of the '664 Patent, since such devices were well known by 2004 and—consistent with the above—were used to create interconnections in which it was necessary to switch between circuits having different transmission capacities, as where interconnected networks used different protocols or traffic rates. Jeffay Decl. ¶¶ 72-73.

3.   "means for creating a graph of routing nodes and links" (claim 4)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite	<u>Function</u>: creating a graph of routing nodes and links

Function: creating a graph of routing nodes and links Structure: none disclosed	Structure: network configuration management system comprising a routing manager and inventory database and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '664 pat., col. 3:22-25, 4:7-9, 4:13-18, 6:64-7:45; *see also* '187 pat. app. (US 2003/0189919), paras. [0032]-[0033], [0035].

The parties agree that this term is subject to Section 112 ¶ 6 and identify the same function. The parties disagree as to whether the specification must disclose an algorithmic structure, and if so, whether the specification discloses a sufficient algorithmic structure. Because this function is implemented in a computer (Jeffay Decl. ¶ 77), the specification therefore must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333. However, the specification fails to disclose an algorithm that performs the claimed function rendering the term indefinite. *Williamson*, 792 F.3d at 1350. The four passages from the specification cited by Plaintiff all simply provide that a graph is created, but they do not describe how it is done. '664 Pat. at 3:22-25 ("[A] network routing graph is created by an inventory subsystem in a routing manager by inventorying the physical network elements and links in the network."), 4:7-9 ("[R]outing manager 304 maintains a topological graph comprising nodes and links that model the broadband network 112."); Jeffay Decl. ¶ 78. Apparently reaching to find some algorithmic structure, Plaintiff also cites three excerpts from U.S. Application No. 2003/0189919, which Plaintiff contends was incorporated by reference into the '664 Patent. But, again, none of the three cited passages describe how the topology of the graph of routing nodes and links is actually created; rather, they respectively describe the circumstances under which the graph is updated (Ex. 20 ¶ 32), the storage of the graph topology in various tables (*Id.* ¶ 33), and the updating of the inventory subsystem and routing tables with information such as product type and identifier for each network element (*Id.* ¶ 35); Jeffay Decl. ¶ 79.

4. "means for modeling said at least a first digital cross connect system as a link between those routing nodes representing said first network element and said second network element" (claim 4)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Indefinite Function: modeling said at least a first digital cross connect system as a link between those routing nodes representing said first network element and said second network element Structure: none disclosed	Function: modeling said at least a first digital cross connect system as a link between those routing nodes representing said first network element and said second network element Structure: network configuration management system comprising a routing manager and inventory database and structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '664 pat., col. 7:24-45; see also '187 pat. app. (US 2003/0189919), paras. [0032]-[0033], [0035].

The parties agree that this term is subject to Section 112 ¶ 6 and identify the same function. The function is implemented in a computer (Jeffay Decl. ¶ 83), so the specification must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333. Again, it does not and the term is therefore indefinite. *Williamson*, 792 F.3d at 1350. Plaintiff cites only one passage from the specification of the '664 Patent, stating only that the digital cross connects will be "treat[ed]" as links (7:27) or "updated as links in the routing link table" (7:36). The passage does not provide any algorithm or series of steps describing how digital cross connect are to be modeled as links between routing nodes. Jeffay Decl. ¶ 84. Nor do the cited excerpts from U.S. Application No. 2003/0189919 disclose an algorithm for modeling a digital cross connect system as a link between routing nodes; in fact, those excerpts do not even mention the term "digital cross connect," much less describe how one is to be modeled as a link between nodes. Ex. 20 ¶¶ 32, 33, 35; Jeffay Decl. ¶ 85.

5. "means for storing a status of each of said interconnections" (claim 4)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
Function: storing a status of each of said interconnections	Function: storing a status of each of said interconnections Structure: network configuration management system comprising a routing manager and inventory database and

Structure: cross connection status database 324 storing configuration and status information for the digital cross connect system	structural equivalents thereof. To the extent that disclosure of an algorithm is required, *see* algorithms disclosed in '664 pat., col. 4:41-51, 7:24-45, *see also* '187 pat. app. (US 2003/0189919), para. [0053].

The parties agree that this term is subject to Section 112 ¶ 6 and identify the same function. Because this function is implemented in a computer (Jeffay Decl. ¶ 89), the specification must disclose an algorithm that performs the claimed function. *Aristocrat*, 521 F.3d at 1333. Although the parties have phrased differently their proposals for the algorithm that corresponds to this function, there does not appear to be a substantive dispute as to the algorithm's contents because the passages cited by Plaintiff require that configuration and status information for the digital cross connect system must be stored in the database (as does Comcast's proposal). Jeffay Decl. ¶¶ 90-94. Between these two alternatives, the Court should adopt Comcast's proposal because its clearer language will better assist the jury.

6.   "whether a cross-connection using said digital cross connect [system] was successfully provisioned" (claim 49)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
"whether traffic was successfully routed across the digital cross connect [system] to the appropriate destination"	no construction required / plain and ordinary meaning

As discussed above in connection with the '249 Patent and '285 Patent, the parties dispute whether the terms "provisioning" and "provisioned" should be construed in isolation or in the context of each claim phrase. Comcast's proposal here helpfully explains that "provisioned" in this context requires that traffic be successfully routed across the digital cross connect to the appropriate destination, as explained by the following passage:

> As a result, when service activation system **310** invokes the routing engine **308** *to provision a path*, that engine will treat the DCSs as links to be provisioned and not one or more network nodes corresponding to the ports on the DCS. When network traffic traverses a particular DCS, configuration and status information related to that DCS is retrieved from cross connection status database 324 to identify how *the*

> *path across the DCS should be provisioned to route the traffic to the appropriate*
> *destination*.

'664 Pat. at 7:36-45. Thus, the Court should adopt Comcast's proposal because it is helpful to

the jury and is supported by the specification.

E.   Terms of the '846 Patent

The '846 Patent, which claims priority through a series of prior applications to an original

application filed on March 12, 2001, relates to protecting a mobile subscriber's "transport

address" from loss in a mobile telecommunications network. '846 Pat. at 1:21-27. A "transport

address" (or TA) is a temporary address through which a subscriber is reachable, such as via a

network component called a Call State Control Function (or CSCF), when away from the

subscriber's home network. *Id*. at 5:14-18. For example, the transport address may be lost

during a crash of a "Call State Control Function (CSCF)" or during "reset situations of a network

element realizing CSCF functionality." *Id*. at 1:21-27. The '846 Patent suggests that the July

2000 version 3rd Generation Partnership Project (3GPP) mobile network standard, which the

patent incorporates by reference and refers to as a "3GPP All-IP mobile network," failed to

explicitly include any protection of a transport address from loss. *Id*. at 1:36-50; Ex. 21 (3GPP

TR 23.821 V1.01.1).

The '846 Patent states that in predecessor mobile communication networks, a mobile

subscriber is always addressable by a "home address" (i.e., "an IP address assigned to it within

its home subnet prefix on its home link") whether attached to its home link or a foreign link.

'846 Pat. at 3:11-29. When attached to some foreign link, the subscriber is also addressable via

one or more "care-of" addresses. *Id*. at 3:30-39. A subscriber registers the care-of-address with

its home link, so that any packet directed to the home address can be redirected from the home

link to the foreign link for routing to the mobile subscriber. *Id.* at 3:49-65. In the context of

3GPP All-IP, this foreign link is referred to as a serving- or "servicing-call state control function (S-CSCF)." *Id.* at Abstract, 3:66-4:3.

The '846 Patent suggests that when subscriber information was lost in a predecessor network, it could be recovered via a paging mechanism. '846 Pat. at 4:4-12. However, in the 3G All-IP network, it was insufficient to use the current S-CSCF information to reach a mobile subscriber in the event that the subscriber's current TA was lost, such as in the event of a failure of the S-CSCF. *Id*. at 4:4-20. The applicants asserted that the "TA of a 3G All-IP subscriber should be protected against loss with the same level of security as that for the Serving CSCF (S-CSCF)." *Id.* at 4:21-23. The applicants proposed protecting a transport address against loss by having the transport address "be forwarded to the HSS [Home Subscriber Server] at registration and downloaded from the HSS to the S-CSCF during recovery." *Id*. at 4:23-29.

Claim 1 of the '846 Patent broadly reads as follows:

1. A method comprising:

receiving, from a first server at a second server, a transport address and an address of the first server;

receiving, at the second server, a request from the first server to restore the transport address; and

in response to the request from the first server to restore the transport address, communicating the transport address to the first server from the second server.

'846 Pat. at 6:31-38. Thus, claim 1 recites the simple concept of backing up data (i.e., a "transport address") from a "first server" to a "second server" so that it can be restored to the "first server" if needed. The asserted dependent claims add little more (e.g., dependent claims 2 and 3 merely apply names to the "first server" (i.e., S-CSCF) and "second server" (i.e., HSS)).

1.   "transport address" (claims 1, 4, 5, 6, 7, 8)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
the current IP address, not the static home address, through which the mobile device can be reached when visiting a foreign link	IP address associated with a mobile node while the subscriber is visiting a particular foreign link

The term "transport address" should be construed as "the current IP address, not the static home address, through which the mobile device can be reached when visiting a foreign link" such as when a mobile subscriber has roamed outside of the home network. This is consistent with the language of the specification describing the transport address as "the current address where the subscriber is reachable." '846 Pat. at 5:14-16. Indeed, Plaintiff's proposed construction is essentially the same with only one material difference: Plaintiff asserts that the "transport address" can be the "static home address" while Comcast's proposal clarifies that it cannot. Comcast's proposal is directly supported by the patent specification, which distinguishes the "transport address" from the subscriber's home network address and expressly states that the "TA" (i.e., the "transport address") "is *not the static home address* but rather is the Care-of-Address." *Id*. at 5:14-21; *see also id*. at 1:22-24 (describing the transport address as "a current Care of Address of a mobile subscriber"). During prosecution of the original parent application to which the '846 Patent claims priority, the applicants stated: "The TA [transport address] is defined as the Care of Address which is an IP address associated with a mobile node *while the subscriber is visiting a foreign link*." Ex. 22. The "transport address" is therefore "the current IP address…through which the mobile device can be reached when visiting a foreign link," and—as the specification explicitly states—it is "not the static home address." Plaintiff's contrary assertion should be rejected, and the Court should adopt Comcast's proposed construction that recognizes this explicit limitation on the scope of the claim term.

2.   **"home subscription server (HSS)" (claim 2)**

Comcast's Proposed Construction	Plaintiff's Proposed Construction
the master database for a given user containing subscription related information to support the network entities actually handling calls	no construction required/plain and ordinary meaning *alternatively, if construed,* "master user database that supports the IP Multimedia Subsystem (IMS) network entities that handle the calls/sessions"

Dependent claim 2 recites that "the second server is a home subscription server (HSS)." '846 Pat. at 6:39-40. Comcast proposes a construction for the term "home subscription server (HSS)" in order to assist the jury in understanding this claim. The patent specification does not specifically define the term, but the 3GPP technical report incorporated by reference explicitly states: "The Home Subscription Server (HSS) is the master database for a given user. It is the entity containing the subscription related information to support the network entities actually handling calls/session." Ex. 21 at Comcast_0007566; *see also* Ex. 23 ¶ [0080] (prior art reference cited in prosecution with the same definition of an HSS). Comcast proposes construing the claim term consistent with the intrinsic evidence as "the master database for a given user containing subscription related information to support the network entities actually handling calls/sessions."

Plaintiff asserts that the term should have its plain and ordinary meaning but has not explained how that differs from Comcast's proposal. Plaintiff proposes, in the alternative, a similar construction but attempts to add an unstated limitation narrowing the term to a database supporting "IP Multimedia Subsystem (IMS)" network entities, even though the term "IP Multimedia Subsystem (IMS)" does not appear in the patent specification or the incorporated by reference 3GPP technical report. Plaintiff's proposal therefore inappropriately narrows the definition and does so by including a new term that would be equally unknown to the jury as the term being construed.

3. "serving-call state control function (S-CSCF)" (claim 3)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
the component in a mobile network switching system that connects calls originating from and received for a mobile device	no construction required/plain and ordinary meaning *alternatively, if construed,* "primary node in the IP Multimedia Subsystem (IMS) responsible for session control"

Dependent claim 3 recites that "the first server is a serving-call state control function (S-CSCF)." '846 Pat. at 6:41-42. Comcast proposes a construction for the term "serving-call state control function (S-CSCF)" in order to assist the jury in understanding this technical term. The patent specification does not specifically define the term, but the incorporated by reference 3GPP technical report explains that "[t]he Serving CSCF is used for mobile originating communications and also to support mobile terminated[7] communications," and it "supports the signaling interactions with the UE [user equipment, e.g., mobile phone]…." Ex. 21 at Comcast_0007565. Comcast proposes construing the term consistent with the technical report—though in a manner intended to be more useful to the jury—as "the component in a mobile network switching system that connects calls originating from and received for a mobile device."

Plaintiff's proposal inserts reference to a node in the "IP Multimedia Subsystem (IMS)" even though, again, the term "IP Multimedia Subsystem (IMS)" does not appear in the patent specification or the incorporated by reference 3GPP technical report. Plaintiff's proposal therefore inappropriately narrows the definition and does so by including a new term that is likely to be as unknown to the jury as the term being construed.

F. Terms of the '883 Patent

The '883 Patent is a reissue of an original patent claiming priority to a 2003 provisional

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[7] In the 3GPP technical report, "mobile terminated" communications refer to calls to be received by the user equipment. *See e.g.*, Ex. 21 at Comcast_0007565 (referring to "mobile originated" and "mobile terminated" communications), 0007570 (same).

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application. The '883 Patent relates to an enhanced phone-based collaboration (EPC) application

that "enables users to quickly and easily enhance an ongoing phone call with a variety of

interpersonal real-time two-way communications (IRTC)." '883 Pat. at Abstract. The patent

acknowledges that many forms of real-time two-way communications existed by 2003 (e.g.,

"wireline and wireless telephony, audio/video conferencing, instant messaging, application

sharing, desktop display sharing, whiteboard sharing, networked gaming and co-browsing") and

assertes that "end users would benefit from being able to augment a telephone conversation with

other forms of IRTC." *Id*. at 1:30-34, 1:40-41. According to the '833 Patent, "[o]ne problem is

that most IRTC interactions start with a regular phone call and there is no easy way to add other

forms of IRTC to the phone call in progress." *Id*. at 1:63-65; *see also id*. at 2:48-51 ("Many of

the current methods of enhancing the phone call are cumbersome and are not practical unless

both users already subscribe to the same service and have already installed the corresponding

software.").

The '883 Patent describes an "Enhanced Phone-based Collaboration (EPC) service that

will enable telephone parties to easily and conveniently add other IRTC applications for

collaboration by leveraging the phone call already in progress." '883 Pat. at 3:6-10. "In

particular, a subscriber needs only to establish a phone call and the enhancement can be achieved

by using a choice driven web page." *Id*. at 3:62-64. The '883 Patent illustrates several

embodiments in which two users can establish a call over a "telephone network" and then

enhance that call by adding a collaboration session over a separate "data network." *Id*. at Figs. 1-

3. In each, a remotely located "Enhanced Phone Collaboration Application" purportedly

"supports a seamless transition from a simple phone call to a phone call extended with data

collaboration" over the data network. *Id*. at 6:43-60.

1. "telephone network" (claims 1, 6)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
"the Public Telephone Network or a private enterprise network of telephones"	no construction required/plain and ordinary meaning

Claims 1 and 6 recite two distinct networks: a "telephone network" and a "data network." '883 Pat. at 14:62-15:4, 15:47-16:5. The claims explain that the "telephone network" is "for establishing connections between users" and the "data network" is "for establishing data sharing sessions between said users." *Id*. at 14:64-66, 15:48-50.[8] Comcast proposes a construction for the term "telephone network" because Plaintiff's infringement contentions identify only one network—the Internet—that does not constitute a "telephone network" as defined in the patent specification. *Id*. ("The network may be the Public Telephone Network or a private enterprise network."); *see also* Ex. 24 at 834 (technical dictionary defining "public telephone network" and "public switched telephone network"). Plaintiff urges the Court not to construe this term in an apparent attempt to avoid having to identify any accused "telephone network" but offers no basis to deviate from the definition in the patent, which requires a network for <u>connecting telephones</u> that is distinct from the data network.

2. "add[ing] the collaboration session to the [existing/chosen] telephone call" (claims 1, 6, 8)

Comcast's Proposed Construction	Plaintiff's Proposed Construction
"establishing a separate collaboration session in addition to the [existing/chosen] telephone call"	no construction required/plain and ordinary meaning

In the method of claim 1, a user clicking on a control button causes the "enhanced phone base collaboration" (EPC) application "to add the collaboration session to the existing telephone call between said users." '883 Pat. at 15:7-12. Similarly, claim 6 requires that a user click on a

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[8]   This description appears in the claim preambles, which the parties have agreed are limiting.

control button "to cause said enhanced phone based collaboration application to add the collaboration session to the chosen telephone call." *Id.* at 16:11-15, Cert. of Correction. Claim 8 also refers to "adding the collaboration session to the existing telephone call" when two subscriber users click on an "enhance call" button. *Id.* at 16:30-34. The plain and ordinary meaning of "adding the collaboration session to an existing telephone call" is to establish a new collaboration session <u>in addition to</u> the existing telephone call. Comcast's proposal merely states this plain meaning. It is necessary, however, because Plaintiff alleges that the limitation is satisfied not by adding a collaboration session to the existing telephone call but by changing from the existing telephone call to a collaboration session (i.e., replacing the existing telephone call with a video call). Comcast's proposed construction is also supported by the patent specification. For example, the specification defines the "Enhanced Phone-based Collaboration Application" as an application that "supports seamless transition from a simple phone call to a phone call extended with data collaboration" (i.e., the phone call continues and an additional data collaboration session is added to it). '883 Pat. at 6:43-45; *see also id.* at Abstract ("enhancing an ongoing phone call"), 1:40-41 ("end users would benefit by being able to augment a telephone conversation with other forms of IRTC"), 1:42-50, 1:51-53 ("communicating parties start with a simple phone all and then, as appropriate, add other forms of IRTC"), 3:6-11 ("conveniently add other IRTC applications"), 4:32-35 (same), 4:55-57 ("add enhanced collaboration to that call"), 5:5-7 (same), 5:31-34 (same), 5:46-48 (same), 9:53-57. Plaintiff suggests that the term should be given its plain meaning but offers nothing to support its implicit argument that "in addition to" means "changing from one to another" or "replacing one with the other."

IV.   CONCLUSION

For the foregoing reasons, Comcast respectfully requests that the Court adopt Comcast's proposed constructions.

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CERTIFICATE OF SERVICE

I hereby certify that on October 15, 2021, all counsel of record who are deemed to have

consented to electronic service are being served with a copy of this document via the Court's

CM/ECF system.

/s/ *Timothy P. Horgan-Kobelski*
Timothy P. Horgan-Kobelski